

**IMPEDANCE-MATCHED OUTPUT DRIVER CIRCUITS
HAVING LINEAR CHARACTERISTICS AND ENHANCED COARSE
AND FINE TUNING CONTROL**

Abstract of the Disclosure

Impedance-matched output driver circuits include a first totem pole driver stage and a second totem pole driver stage. The first totem pole driver stage includes at least one PMOS pull-up transistor and at least one NMOS pull-down transistor therein that are responsive to a first pull-up signal and a first pull-down signal, respectively. The second totem pole driver stage has at least one NMOS pull-up transistor and at least one PMOS pull-down transistor therein that are responsive to a second pull-up signal and second pull-down signal, respectively. The linearity of the output driver circuit is enhanced by including a first resistive element that extends between the first and second totem pole driver stages. The first resistive element has a first terminal, which is electrically coupled to drain terminals of the at least one PMOS pull-up transistor and the at least one NMOS pull-down transistor in the first totem pole driver stage, and a second terminal, which is electrically coupled to source terminals of the at least one NMOS pull-up transistor and the at least one PMOS pull-down transistor in the second totem pole driver stage.

#311404